wasteWmanagement

Volume 22, Number 1 2002

CONTENTS

H.W. Yu, Z. Samani, A. Hanson, G. Smith	1	Energy recovery from grass using two-phase anaerobic digestion
M. Warith	7	Bioreactor landfills: experimental and field results
T. van Kessel, W.G.M. van Kesteren	19	Gas production and transport in artificial sludge depots
Z. Youcai, W. Luochun, H. Renhua, X. Dimin, G. Guowei	29	A comparison of refuse attenuation in laboratory and field scale lysimeters
S. Valls, E. Vàzquez	37	Leaching properties of stabilised/solidified cement-admixtures-sewage sludges systems
G. Koufodimos, Z. Samaras	47	Waste management options in southern Europe using field and experimental data
V. Risoul, V. Renauld, G. Trouvé, P. Gilot	61	A laboratory pilot study of thermal decontamination of soils polluted by PCBs. Comparison with thermogravimetric analysis
R.V. Shende, V.V. Mahajani	73	Wet oxidative regeneration of activated carbon loaded with reactive dye
N.M. Al-Mansi, N.M. Abdel Monem	85	Recovery of nickel oxide from spent catalyst
H. Ohbayashi, M. Hosomi, H. Kanbe, A. Melber, J. Bruckamp	91	Removal of polychlorinated biphenyls from capacitors and pressure-sensitive paper by vacuum thermal recycling
E.J. Anthony, E.M. Bulewicz, K. Dudek, A. Kozak	99	The long term behaviour of CFBC ashwater systems
	113	Book reviews

Volume 22, Number 2 2002

SPECIAL ISSUE—WASTE STABILIZATION AND ENVIRONMENT

CONTENTS

Editorial	iii	Waste stabilization and environment: towards the definition of waste stabilization objectives, taking into account the potential health and environmental impacts
J.D. Eusden Jr., L. Gallagher, T.T. Eighmy, B.S. Crannell, J.R. Krzanowski, L.G. Butler, F.K. Cartledge, E.F. Emery, E.L. Shaw, C.A. Francis	117	Petrographic and spectroscopic characterization of phosphate-stabilized mine tailings from Leadville, Colorado
P. Frugier, N. Godon, E. Vernaz, F. Larché	137	Influence of composition variations on the initial alteration rate of vitrified domestic waste incineration fly-ash

C. Vandecasteele, V. Dutré, D. Geysen, G. Wauters	143	Solidification/stabilisation of arsenic bearing fly ash from the metallurgical industry. Immobilisation mechanism of arsenic
S.K. Ouki, C.D. Hills	147	Microstructure of Portland cement pastes containing metal nitrate salts
E. Moudilou, M. Bellotto, C. Defosse, I. Serclerat, P. Baillif, J.C. Touray	153	A dynamic leaching method for the assessment of trace metals released from hydraulic binders
P. Freyssinet, P. Piantone, M. Azaroual, Y. Itard, B. Clozel-Leloup, D. Guyonnet, J.C. Baubron	159	Chemical changes and leachate mass balance of municipal solid waste bottom ash submitted to weathering
P. Baranger, M. Azaroual, P. Freyssinet, S. Lanini, P. Piantone	173	Weathering of a MSW bottom ash heap: a modelling approach
H.A. van der Sloot	181	Characterization of the leaching behaviour of concrete mortars and of cementstabilized wastes with different waste loading for long term environmental assessment
J. Knight, C. Cheeseman, R. Rogers	187	Microbial influenced degradation of solidified waste binder
V. Desjardin, R. Bayard, N. Huck, A. Manceau, R. Gourdon	195	Effect of microbial activity on the mobility of chromium in soils
A. Martin-Garin, J.P. Gaudet, L. Charlet, X. Vitart	201	A dynamic study of the sorption and the transport processes of cadmium in calcareous sandy soils
H. Takigami, S. Matsui, T. Matsuda, Y. Shimizu	209	The *Bacillus subtilis* rec-assay: a powerful tool for the detection of genotoxic substances in the water environment. Prospect for assessing potential impact of pollutants from stabilized wastes
Y. Perrodin, A. Gobbey, L. Grelier-Volatier, V. Canivet, J.F. Fruget, J. Gibert, C. Texier, D. Cluzeau, R. Gros, F. Poly, L. Jocteur-Monrozier	215	Waste ecocompatibility in storage and reuse scenarios: global methodology and detailed presentation of the impact study on the recipient environments
, Y. Perrodin, J. Méhu, L. Grelier-Volatier, P. Charbonnier, P. Baranger, L. Thoraval	229	Methodological approach towards the definition of new storage conditions for inert wastes
A. Nzihou, P. Sharrock	235	Calcium phosphate stabilization of fly ash with chloride extraction
C. Békaert, V. Ferrier, J. Marty, A. Pfohl-Leszkowicz, A. Bispo, M.J. Jourdain, M. Jauzein, L. Lambolez-Michel, H. Billard	241	Evaluation of toxic and genotoxic potential of stabilized industrial waste and contaminated soils
F. Sanchez, C. Gervais, A.C. Garrabrants, R. Barna, D.S. Kosson	249	Leaching of inorganic contaminants from cement-based waste materials as a result of carbonation during intermittent wetting

Volume 22, Number 3 2002

CONTENTS

L.F. Diaz	iii	Editorial
Y.-S. Jang, Y.-W. Kim, S.-I. Lee	261	Hydraulic properties and leachate level analysis of Kimpo metropolitan landfill, Korea

M. El-Fadel, E. Bou-Zeid, W. Chahine, B. Alayli	269	Temporal variation of leachate quality from pre-sorted and baled municipal solid waste with high organic and moisture content
D.L. Freedman, J.M. Cashwell, B.J. Kim	283	Biotransformation of explosive-grade nitrocellulose under denitrifying and sulfidogenic conditions
F.K.M. Kazi, P.A. Cooper	293	Rapid-extraction oxidation process to recover and reuse copper chromium and arsenic from industrial wood preservative sludge
S. Ferrari, H. Belevi, P. Baccini	303	Chemical speciation of carbon in municipal solid waste incinerator residues
J. Reich, C. Pasel, J.-D. Herbell, M. Luckas	315	Effects of limestone addition and sintering on heavy metal leaching from hazardous waste incineration slag
M. Fuhrmann, D. Melamed, P.D. Kalb, J.W. Adams, L.W. Milian	327	Sulfur Polymer Solidification/Stabilization of elemental mercury waste
N. Lapa, J.F. Santos Oliveira, S.L. Camacho, L.J. Circeo	335	An ecotoxic risk assessment of residue materials produced by the plasma pyrolysis/vitrification (PP/V) process
N.E. Korte, O.R. West, L. Liang, B. Gu, J.L. Zutman, Q. Fernando	343	The effect of solvent concentration on the use of palladized-iron for the step-wise dechlorination of polychlorinated biphenyls in soil extracts
S. Goskonda, W. James Catallo, T. Junk	351	Sonochemical degradation of aromatic organic pollutants
H.S. Altundoğan, S. Altundoğan, F. Tümen, M. Bildik	357	Arsenic adsorption from aqueous solutions by activated red mud
	365	Book reviews

Volume 22, Number 4 2002

SPECIAL ISSUE—INTERNATIONAL CONFERENCE ON INCINERATION AND THERMAL TREATMENT TECHNOLOGIES

CONTENTS

A. Eicher	iii	Editorial
Y.B. Yang, Y.R. Goh, R. Zakaria, V. Nasserzadeh, J. Swithenbank	369	Mathematical modelling of MSW incineration on a travelling bed
P.M. Lemieux, E.S. Stewart, J.V. Ryan	381	Pilot-scale studies on the effect of bromine addition on the emissions of chlorinated organic combustion by-products
T.C. Ho, N. Kobayashi, Y.K. Lee, C.J. Lin, J.R. Hopper	391	Modeling of mercury sorption by activated carbon in a confined, a semi-fluidized, and a fluidized bed
N. Kojima, A. Mitomo, Y. Itaya, S. Mori, S. Yoshida	399	Adsorption removal of pollutants by active cokes produced from sludge in the energy recycle process of wastes
J.U. Bell	405	Estimating the human health risks from polychlorinated dioxins and furans in stack gas emissions from combustion units: implications of USEPA's dioxin reassessment
R.C. Striebich, W.A. Rubey, J.R. Klosterman	413	Trace-level measurement of complex combustion effluents and residues using multidimensional gas chromatographymass spectrometry (MDGCMS)

J.L. Bonte, K.J. Fritsky, M.A. Plinke, M. Wilken	421	Catalytic destruction of PCDD/F in a fabric filter: experience at a municipal waste incinerator in Belgium
J.E. Dunn Jr, W.T. Davis, J.A. Calcagno III, M.W. Allen	427	Field testing of particulate matter continuous emission monitors at the DOE Oak Ridge TSCA incinerator
M.-Y. Tsai, K.-T. Wu, C.-C. Huang, H.-T. Lee	439	Co-firing of paper mill sludge and coal in an industrial circulating fluidized bed boiler
L. Bebar, V. Kermes, P. Stehlik, J. Canek, J. Oral	443	Low NO_x burnersprediction of emissions concentration based on design, measurements and modelling
J.W. Griffith, D.H. Raymond	453	The first commercial supercritical water oxidation sludge processing plant

Volume 22, Number 5 2002

CONTENTS

A. Fouriey	iii	Editorial
B.-K. Lee, M.J. Ellenbecker, R. Moure-Eraso	461	Analyses of the recycling potential of medical plastic wastes
P.D. Johnson, M.A. Watson, J. Brown, I.A. Jefcoat	471	Peanut hull pellets as a single use sorbent for the capture of Cu(II) from wastewater
A.E. Osmanlioglu	481	Immobilization of radioactive waste by cementation with purified kaolin clay
T.W. Cheng, J.P. Chu, C.C. Tzeng, Y.S. Chen	485	Treatment and recycling of incinerated ash using thermal plasma technology
A. Gürses, M. Yalçin, C. Doğar	491	Electrocoagulation of some reactive dyes: a statistical investigation of some electrochemical variables
S. Yedla, J.K. Parikh	501	Development of a purpose built landfill system for the control of methane emissions from municipal solid waste
G. Alther	507	Using organoclays to enhance carbon filtration
A.M. Amer	515	Processing of Egyptian boiler-ash for extraction of vanadium and nickel
K. Hamer, V. Karius	521	Brick production with dredged harbour sediments. An industrial-scale experiment
J.J. Dijkstra, H.A. van der Sloot, R.N.J. Comans	531	Process identification and model development of contaminant transport in MSWI bottom ash
S. Rengaraj, S.-H. Moon, R. Sivabalan, B. Arabindoo, V. Murugesan	543	Agricultural solid waste for the removal of organics: adsorption of phenol from water and wastewater by palm seed coat activated carbon
P.N. Bhat, D.K. Ghosh, M.V.M. Desai	549	Immobilisation of beryllium in solid waste (red-mud) by fixation and vitrification
R. Bai, M. Sutanto	557	The practice and challenges of solid waste management in Singapore
	569	Book reviews

Volume 22 Number 6 2002

CONTENTS

L.F. Diaz	573	Editorial
S.V. Mohan, N.C. Rao, K.K. Prasad, J. Karthikeyan	575	Treatment of simulated Reactive Yellow 22 (Azo) dye effluents using *Spirogyra* species
N. Lapa, R. Barbosa, J. Morais, B. Mendes, J. Méhu, J.F.S. Oliveira	583	Ecotoxicological assessment of leachates from MSWI bottom ashes
S.H. Lin, M.J. Cheng	595	Adsorption of phenol and *m*-chlorophenol on organobentonites and repeated thermal regeneration
V.A. Rossetti, L. Di Palma, F. Medici	605	Assessment of the leaching of metallic elements in the technology of solidification in aqueous solution
N. Genç, Ş. Yonsel, L. Dağaşan, A.N. Onar	611	Wet oxidation: a pre-treatment procedure for sludge
J. Oman, B. Dejanovič, M. Tuma	617	Solutions to the problem of waste deposition at a coal-fired power plant
C.L. Kim, J.W. Park, J.Y. Kim, C.H. Chung	625	Improvement of nuclide leaching resistance of paraffin waste form with low density polyethylene
A. Xenidis, E. Mylona, I. Paspaliaris	631	Potential use of lignite fly ash for the control of acid generation from sulphidic wastes
M. Greenberg, D. Lewis, M. Frisch	643	Local and interregional economic analysis of large US Department of Energy waste management projects
A. Carbonell-Barrachina, R.D. DeLaune, A. Jugsujinda	657	Phosphogypsum chemistry under highly anoxic conditions
C. Solisio, A. Lodi, F. Veglio	667	Bioleaching of zinc and aluminium from industrial waste sludges by means of *Thiobacillus ferrooxidans*
A.E. Lewis, C. Beautement	677	Prioritising objectives for waste reprocessing: a case study in secondary lead refining
Technical note		
P.F. Hudak	687	Spontaneous combustion of shale spoils at a sanitary landfill
	689	Book reviews

Volume 22, Number 7 2002

SPECIAL ISSUE—DEVELOPMENTS IN TESTING FOR ENVIRONMENTAL IMPACT ASSESSMENT

CONTENTS

H.A. van der Sloot	693	Editorial Developments in testing for environmental impact assessment
C.-C. Tung, Y.-M. Yang, C.-H. Chang, J.-R. Maa	695	Removal of copper ions and dissolved phenol from water using micellar-enhanced ultrafiltration with mixed surfactants
G. Annadurai, R.-S. Juang, D.-J. Lee	703	Microbiological degradation of phenol using mixed liquors of *Pseudomonas putida* and activated sludge

J.P. Chen, M.-L. Chua, B. Zhang	711	Effects of competitive ions, humic acid, and pH on removal of ammonium and phosphorous from the synthetic industrial effluent by ion exchange resins
Y. Ku, M.-H. Wu, Y.-S. Shen	721	Mercury removal from aqueous solutions by zinc cementation
Y. Abu-Rukah, I. Abu-Aljarayesh	727	Thermodynamic assessment in heavy metal migration at El-Akader landfill site, North Jordan
C.-C. Hsieh, J.-F. Lee, Y.-R. Liu, J.-R. Chang	739	Structural investigation of catalyst deactivation of Pt/SDB for catalytic oxidation of VOC-containing wastewater
G. Chen, H. Lee, K.L. Young, P.L. Yue, A. Wong, T. Tao, K.K. Choi	747	Glass recycling in cement productionan innovative approach
		REGULAR PAPERS
X. Chen, S. Jeyaseelan, N. Graham	755	Physical and chemical properties study of the activated carbon made from sewage sludge
F.J. Berry, N. Costantini, L.E. Smart	761	Synthesis of chromium-containing pigments from chromium recovered from leather waste
J. Viñals, M.J. Balart, A. Roca	773	Inertization of pyrite cinders and co-inertization with electric arc furnace flue dusts by pyroconsolidation at solid state
P. Janoš, M. Wildnerová, T. Loučka	783	Leaching of metals from fly ashes in the presence of complexing agents
A.L. Welker, R.B. Gilbert	791	A bench scale PVD remediation system experiment
P. Galiatsatou, M. Metaxas, D. Arapoglou, V. Kasselouri-Rigopoulou	803	Treatment of olive mill waste water with activated carbons from agricultural by-products
Y.Q. Zhao, D.H. Bache	813	Integrated effects of applied pressure, time, and polymer doses on alum sludge dewatering behaviour
M. Rao, A.V. Parwate, A.G. Bhole	821	Removal of Cr^{6+} and Ni^{2+} from aqueous solution using bagasse and fly ash
A. Guerrero, S. Goñi	831	Efficiency of a blast furnace slag cement for immobilizing simulated borate radioactive liquid waste
	837	Book reviews

Volume 22, Number 8 2002

SPECIAL ISSUE—VARIREI 2001

CONTENTS

D. Mirabile, M.I. Pistelli, M. Marchesini, R. Falciani, L. Chiappelli	841	Thermal valorisation of automobile shredder residue: injection in blast furnace
G. Lusvardi, G. Malavasi, L. Menabue, M. Saladini	853	Removal of cadmium ion by means of synthetic hydroxyapatite
L. Barbieri, A. Corradi, I. Lancellotti, T. Manfredini	859	Use of municipal incinerator bottom ash as sintering promoter in industrial ceramics
A. Giulio Bernstein, E. Bonsembiante, G. Brusatin, G. Calzolari, P. Colombo, R. Dall'Igna, S. Hreglich, G. Scarinci	865	Inertization of hazardous dredging spoils

C. Lupi, D. Pilone	871	NiMH spent batteries: a raw material to produce NiCo alloys
L. Morselli, F. Passarini, M. Bartoli	875	The environmental fate of heavy metals arising from a MSW incineration plant
L. Di Palma, F. Medici	883	Recovery of copper from contaminated soil by flushing
A. Acosta, I. Iglesias, M. Aineto, M. Romero, J.M. Rincón	887	Utilisation of IGCC slag and clay steriles in soft mud bricks (by pressing) for use in building bricks manufacturing.
V. Corinaldesi, M. Giuggiolini, G. Moriconi	893	Use of rubble from building demolition in mortars
F. Pagnanelli, L. Toro, F. Vegliò	901	Olive mill solid residues as heavy metal sorbent material: a preliminary study
C. Collivignarelli, S. Sorlini	909	Reuse of municipal solid wastes incineration fly ashes in concrete mixtures
F. Cavalieri, F. Padella	913	Development of composite materials by mechanochemical treatment of post-consumer plastic waste
S. Galvagno, S. Casu, T. Casabianca, A. Calabrese, G. Cornacchia	917	Pyrolysis process for the treatment of scrap tyres: preliminary experimental results
G. De Angelis, F. Medici, M.R. Montereali, L. Pietrelli	925	Reuse of residues arising from lead batteries recycle: a feasibility study
J.R. Viguri, A. Andrés, A. Irabien	931	Waste minimisation in a hard chromiun plating small medium enterprise (SME)
A. Esposito, A. Del Borghi, F. Vegliò	937	Investigation of naphtalene sulfonate compounds sorption in a soil artificially contaminated using batch and column assays
M. Pelino, A. Karamanov, P. Pisciella, S. Crisucci, D. Zonetti	945	Vitrification of electric arc furnace dusts
L. Di Palma, P. Ferrantelli, C. Merli, E. Petrucci	951	Treatment of industrial landfill leachate by means of evaporation and reverse osmosis
	III	List of Contents and Author Index, Volume 22, 2002